

DATA PACKET ABOUT CLOTH MASKS

DURING THE PANDEMIC

VERSION 1.8

AUGUST 27, 2020

*A EDUCATIONAL APPROACH ON
MASK COMPLIANCE*

*A DATA APPROACH TO
MASKS NO LONGER AVAILABLE TO THE PUBLIC*

*A RESEARCHED APPROACH ON
MATERIAL AND STRUCTURAL DESIGN OF A MASK*

*A TESTED APPROACH ON
BEST CLOTH FACE MASKS DESIGNS*

*A EVENT DRIVEN APPROACH
ON RISK ANALYSIS*

*A EMOTIONAL PLEA
FOR PEOPLE TO UNITE*

IN ORDER TO

REDUCE TRANSMISSION OF
SEVERE ACUTE RESPIRATORY SYNDROME CORONA VIRUS 2 (SARS-CoV-2)
TO PREVENT DEATH FROM
CORONA VIRUS DISEASE 2019 (COVID-19)

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DEDICATED TO

PATRICK

BRANDON

COURTNEY

BRIANNA

AND

THE HUNDRED OF THOUSANDS OTHER LOST TO THIS PANDEMIC

MASKING PREVENTS TRANSMISSION

MASKING SAVES LIVES

WEAR A MASK



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE **INTO MOST EFFECTIVE CLOTH MASK**

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

ABSTRACT

(PARTS 3-5 OF DOCUMENT)

“AIR TAKES THE PATH OF LEAST RESISTANCE “

CURRENT RESEARCH STUDIES ABOUT EFFECTIVENESS OF CLOTH MASKS MOSTLY TAKE IN CONSIDERATION OF FILTRATION OF THE MATERIAL MANY PEOPLE WILL MAKE A MASK OUT OF AMAZING MATERIALS THAT FROM THE STUDIES FILTER WELL. BUT IN ACTUALITY THE MASK IF INEFFECTIVE TO FILTERING ANY PARTICLES. ONE OF THOSE THINGS HAPPEN. THE FIRST GAPS IN THE MASK ALLOW AIR NOT TO GO TROUGH THE FILTER BUT AROUND THE MASK INTO THE PERSONS NOSE OF MOUTH. PEOPLE BELIEVE ITS A GOOD MASK WHEN IN REALITY NOTHING IS BEING FILTERED. THE OTHER HURTLE IS BREATH ABILITY. ANYONE CAN WEAR A MASK FOR FIVE MINUTES. HOWEVER TO WEAR ONE FROM 8 HOURS IS TOTALLY DIFFERENT. THE DOCUMENT WILL EXPLORE CURRENT RESEARCH AND FIND A GOOD WAY TO CREATE A FACE MASK THAT NOT ONLY PROTECTS OTHERS BUT PROVIDES THE WEARING WITH SOME SORT OF PROTECTION



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DOCUMENT CONTENTS

ABSTRACT.....	3
PREFACE.....	6
AUTHOR FORWARD.....	7
DISCLAIMERS.....	8
DIGITAL SIGNATURE VERSION 1.8.....	8
VERSION REVISIONS 1.8.....	9
UNDERSTANDING DOCUMENT FLOW.....	10
TOPIC TABLE OF DATA PACKET.....	10
.....	10
PART 1: AN EDUCATIONAL APPROACH ON MASK COMPLIANCE.....	11
PART 1: MAIN TAKEAWAYS.....	11
UNDERSTANDING THE DISTRUST IN SCIENCE.....	12
HOW DO WE SOLVE.....	12
FOR THE VISUAL LEARNER.....	13
.....	13
REPRESENTATION OF DEATHS AS OF MAY 28 TH 2020.....	14
FOR THE DATA DRIVEN INDIVIDUAL.....	15
SARS-CoV-2 TRANSMISSION TYPES.....	15
THE FACTS.....	15
FOR THOSE WHO DONT WANT TO REPEAT THE PAST.....	16
FOR THE SCIENCE DOUBTER.....	17
FOR THE STUBBORN LOUD ONES.....	18
PART 2: CURRENT FACE MASK INFORMATION.....	19
ANY FACE WITH A VALVE.....	20
WITH ALL MASKS.....	21
WHEN TAKING MASKS ON AND OFF.....	21
HOW OFTEN CAN I WEAR A MASK BEFORE CLEANING.....	21
RESPIRATORS.....	22
CHARACTERISTICS.....	23
SURGICAL MASKS.....	24
SURGICAL MASK INFORMATION TABLE.....	24
CLEANING.....	24
CLOTH MASK.....	25
CLOTH STRUCTURAL DESIGNS.....	25
CHARACTERISTICS.....	26
CLEANING.....	26
PART 3: ANALYZING CLOTH MASK DESIGN.....	27
INTRODCTION.....	27
THE OVERALL PICTURE.....	27
AIR TAKES THE PATH OF LEAST RESISTANCE.....	28
FIRST ASPECT OF A GOOD MASK: FILTRATION.....	29
TYPES OF FILTERS.....	29
MECHANICAL FILTERS.....	30
MECHANICAL FILTER PROPERTY TABLE.....	30
TAKEAWAYS.....	31



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE **INTO MOST EFFECTIVE CLOTH MASK**

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

ELECTROSTATIC FILTERS.....	32
ELECTROSTATIC FILTER PROPERTY TABLE.....	32
ELECTROSTATIC TAKEAWAYS.....	32
HYBRID FILTERS.....	33
MERV RATING.....	33
SECOND ASPECT OF GOOD MASK: FIT /AIR LEAKAGE.....	35
WARNING SIGNS YOUR MASK IS NOT FITTING WELL.....	35
HOW TO ACHIEVE A BETTER FIT.....	35
.....	35
THIRD ASPECT OF A GOOD MASK: BREATH ABILITY.....	36
NON BREATHABLE FILTRATION FABRICS.....	36
PART 4: RESEARCH STUDIED MASK & FILTER DESIGN.....	37
OVERVIEW.....	37
THE DESIGN.....	37
GENERAL GUIDELINES WHEN LAYERING A MAS.....	38
LAYER DEFINITIONS.....	39
THE FILTER DESIGN.....	39
THE MASK DESIGN.....	40
PART 5: RISK ANALYSIS FOR MASK WEARING.....	41
INTRODUCTION.....	41
WHY RISK ANALYSIS IS IMPORTANT.....	41
STEPS TO DETERMINING RISK ANALYSIS.....	42
VISUALIZATION OF PROCESS.....	42
COVID-19 Risk Accessment.....	43
STEP 1: CRITERIA THAT DEFINES A RISK.....	43
STEP 2: PARAMETERIZE TABLES AND ASSIGN RISK.....	44
DEMOGRAPHICS OF SPREAD TABLE.....	45
TABLE.....	45
SCORING THE TABLE.....	45
BIO-METRIC PARAMATIZED TABL.....	46
E.....	46
TABLE.....	46
SCORING THE TABLE.....	46
ENVIROMENTAL FACTOR ANALYSIS TABLE.....	47
GETTING THE FINAL SCORE OF THE RISK ANALYSIS.....	49
FINAL SCORE TO WHAT TO WEAR.....	49
PART 6: A LAST ATTEMPT.....	50
WORK CITED.....	51



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

PREFACE





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE **INTO MOST EFFECTIVE CLOTH MASK**

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

AUTHOR FORWARD

THIS BEGAN AS A RESEARCH PAPER BASED ON THE HEADING. THE PRIMARY FOCUS OF THIS DOCUMENT IS COMBINING FILTRATION BREATH ABILITY AND AIR LEAKAGE WHILE TAKING IN ACCOUNT THE LAW OF AIR TAKES THE PATH OF LEAST RESISTANCE TO CREATE A MASK THAT NOT ONLY PROTECTS OTHERS BUT PROVIDES THE INDIVIDUAL WITH **SOME** PROTECTION IF WORE CORRECTLY. THIS EXPANDED INTO A DATA PACKET TO INCLUDE OTHER ASPECTS OF MASK WEARING INCLUDING COMPLIANCE AND DISTRUST IN SCIENCE. PLEASE UNDERSTANDING DATA FLOW SECTION OF DOCUMENT.





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

DISCLAIMERS

1. RESEARCH ARTICLES AND STUDIES ARE NOT CITED IN THIS DOCUMENT DUE TO LAZINESS THEY ALL CAN BE FOUND UPLOADED AT [HTTPS://ARCHIVE.ORG/DETAILS/COVID_RESOURCES](https://archive.org/details/covid_resources) IF THE SITE GOES DOWN PLEASE EMAIL THE AUTHOR AT [R4770UB@GMAIL.COM](mailto:r4770ub@gmail.com) TO LET HIM KNOW SO I CAN RESOLVE THE ISSUE.
2. THE AUTHOR DISCLOSES THEY ARE NOT A DOCTOR
3. TAKE ANY ADVICE GIVEN IN THIS DOCUMENT WITH CAUTION
4. RESEARCH ABOUT COVID-19 IS A RAPIDLY EVOLVING SITUATION. RESEARCH COMING IN GREAT AMOUNTS. RESEARCH HAS CHANGED THROUGH THE EVOLUTION OF THE VIRUS SO INFORMATION MAY NOT BE UP TO DATE.
5. ENCOURAGE THE READER TO DO THEIR OWN RESEARCH AND TRY DIFFERENT THINGS.

DIGITAL SIGNATURE VERSION 1.9

X 
Ryan Kulkarni
Author



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REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

VERSION REVISIONS 1.9

COVID – 19 IS A RAPIDLY AND EVOLVING SITUATION. AS NEW INFORMATION COMES OUT ABOUT THE VIRUS OLDER VERSIONS OF THE DOCUMENT BECOME OUTDATED AND SOME INFORMATION IS INCORRECT. THIS IS SCIENCE THIS IS OK. WE LEARN AND CORRECT FROM IT AND THAT'S HOW WE EVOLVE

SECTION TOPIC AND NUMBER	VERSION 1.8	VERSION 1.9
PART 1: WHY WE SHOULD WEAR A MASK	NOTHING TAKEN OUT	NOTHING UPDATED
PART 2: CURRENT MASKS	NOTHING TAKEN OUT	NOTHING UPDATED
PART 3: IMPROVING THE CLOTH MASK	NOTHING TAKEN OUT	NOTHING UPDATED
PART 4: RESEARCHED DESIGNED MASK	NOTHING REMOVED	WORKING ON THE UPDATING THE SECTION
PART5: RISK ASSESSMENT	NOTHING REMOVED	UPDATED TO LATEST INFORMATION
PART 6: AN EMOTIONAL PLEA	DID NOT CHANGE	DID NOT CHANGE



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

UNDERSTANDING DOCUMENT FLOW

THIS DATA PACKET BEGAN AS IMPROVING THE DESIGN ON A CLOTH MASK. THROUGH RESEARCH AND TESTING. THERE IS A BIGGER ISSUE. PEOPLES DISTRUST IN SCIENCE. THIS IS WHY PARTS 1 AND 6 WERE ADDED. I THINK WE ALL HAVE A DUTY TO EDUCATE THE MISINFORMED WHO ARE OPEN TO LISTENING. BELOW IS A TOPIC TABLE FOR THIS DATA PACKET

TOPIC TABLE OF DATA PACKET

#	PART TITLE	TOPICS	RATIONAL
1	AN EDUCATION APPROACH ON WHY WE MASK	UNDERSTAND WHY PEOPLE HAVE LOST TRUST IN SCIENCE. THAT MAJORITY OF PEOPLE DO WANT TO DO THE RIGHT THING AND GO ABOUT HOW TO EDUCATE PEOPLE OF FACE MASKS	IF WE CHOOSE TO IGNORE THE OTHER SIDE NOTHING WILL CHANGE. WE NEED 90% OF PEOPLE TO BE COMPLIANT WITH MASKS IN ORDER TO SAFETY REOPEN IN DOOR ACTIVITIES.
2	TYPES OF FACE COVERINGS	GOES INTO DETAIL ABOUT THE TYPE OF MASK AND MATERIALS ITS MADE OUT OF	THE RESEARCH OFTEN REFERS TO STUDIES THAT REFER THE THE MATERIALS. WANTED TO CREATE A SUMMARIZED SECTION FOR THIS.
3	TESTED RESEARCH FINDINGS	THE MAJORITY OF THE STUDIES ONLY TEST THE FILTRATION OF FABRICS. THIS DOCUMENT TESTED AND FOUND WHAT THE BEST TRADE OFF COULD BE	IF YOU HAVE AIR LEAKAGE THROUGH POOR MASK STRUCTURE OR THE FABRIC ISN'T BREATHABLE BUT THE WEARER DOESN'T REALIZE AIR IS COMING THROUGH THE GAPS THE MASK DOES NOT FILTER.
4	RESEARCH APPROACH TO DESIGNING A MASK	NOT A TUTORIAL OF HOW TO MAKE A MASK. BUT A DESIGN APPROACH SO MASKS CAN PROTECT THE WEARING SOMEWHAT BETTER THEN OTHER DESIGNS.	MAKES ADJUSTMENTS TO RESEARCH BASED ON TESTING.
5	RISK ASSESSMENT ANALYSIS		GOES OVER RISK EVENTS AND THE DIFFERENT MASK THAT COULD BE WORN
6	A PERSONAL NOTE		CONCLUDING STATEMENTS



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

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PART 1: AN EDUCATIONAL APPROACH MASK COMPLIANCE

PART 1: MAIN TAKEAWAYS

“FACE MASKS ARE A BANDIED, SCIENCE IS THE SOLUTION TO PANDEMIC”

“AMERICA HAS LOST TRUST IN SCIENCE WE NEED TO GET THEIR TRUST BACK. 50% OF PEOPLE WONT GET THE VACCINE IF SOMEONE HAS NOT BEEN OR KNOWN SOMEONE DIRECTLY AFFECTED BY THE VIRUS THEY ARE LESS LIKELY TO WEAR A MASK.”

“SCIENCE SEE FROM THE ANTI SCIENCE EXTREME BELIEVERS AND THE PEOPLE STABBING PEOPLE OVER WEARING MASKS”

“SCIENCE FAILS TO SEE THE MAJORITY OF PEOPLE ARE MISINFORMED DON'T UNDERSTAND SCIENCE, SEE THINGS THAT MAKE SENSE ON SOCIAL MEDIA BUT ARE OPEN TO CHANGE”





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

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UNDERSTANDING THE DISTRUST IN SCIENCE

AS A ENGINEER THE IDEA THAT PEOPLE THINK THIS IS A CONSPIRACY THEORY BLEW MY MIND OR THAT THEY MUST JUST BE SAYING WHAT THEY HEARD ON THE INTERNET. WE HAVE TO CONSIDER IF YOU ARE READING THIS YOU LIKELY WORK IN A ENGINEERING OR RESEARCH FIELD. IF THE AVERAGE EDUCATION LEVEL OF THE UNITED STATES IN 9TH GRADE. IT MAKES THE FOLLOWING POINTS SEEM MORE LIKEY THEN EVERYONE IS BAT SHIT CRAZY. I ASKED A WOMAN ONCE WHY DONT YOU WEAR A MASK. AND SHE SAID DO YOUR OWN RESEARCH DONT TRUST WHAT THEY SAY. THIS LED TO HER SHOWING ME ALL THIS “RESEARCH SHE SOUND” IT DAWNED ON ME A COUPLE OF THINGS.

1. PEOPLE DON'T UNDERSTAND THAT SCIENCE ISN'T EFFECTIVE BECAUSE ITS RIGHT ALL THE TIME. SCIENCE IS EFFECTIVE BECAUSE IT MAKES THE DECISION ON THE BEST INFORMATION POSSIBLE AND IS NOT BIAS. AS NEW INFORMATION IF THE INFORMATION AGREES SCIENCE DOESN'T CHANGE ITS VIEW BUT WHEN ITS WRONG IT READJUSTS ITS VIEW. THIS DOESN'T MAKE SCIENCE WRONG IT MAKES IT EFFECTIVE.
2. MAJORITY OF PEOPLE DON'T UNDERSTAND A SNAPSHOT OF A CERTAIN PIECE OF DATA IS NOT A GOOD DATA. BUT MAJORITY OF PEOPLE DON'T UNDERSTAND WHAT A 7 DAY AVERAGE IS OR WHAT DATA PLOTTED ON A LOG SCALE CAN BE MORE USEFUL THEN THE ACTUAL DATA. UNLESS TRAINED NO ONE WOKE UP ONE DAY AND TRULY UNDERSTOOD THE DIFFERENCE BETWEEN EXPONENTIAL AND LINEAR GROWTH.
3. MAJORITY THINK IF A FACE-BOOK POST HAS 300,000 LIKES THAT ITS MORE ACCURATE THEN A SINGLE 12 PAGE RESOURCE PAPER. THEY HAVE NO IDEA WHAT A DOUBLE BLINDED RANDOMIZED CLINICAL TRIAL IS. BUT THEY DO UNDERSTAND A SCREEN SHOT OF THE CDC SAYING FACE MASKS ARE INEFFECTIVE AND THE SCREEN SHOT OF A RESEARCH ARTICLE SAYING “CLOTH MASKS DO NOT PROTECT YOU FROM THE VIRUS”

TO SCIENCE BELIEVERS THIS SEEMS ABSURD. BUT IF YOU GREW UP ON A FARM AND WAS TOLD SCIENCE IS ALWAYS RIGHT. AND THEN THE EVOLUTION OF SOCIAL MEETING

HOW DO WE SOLVE

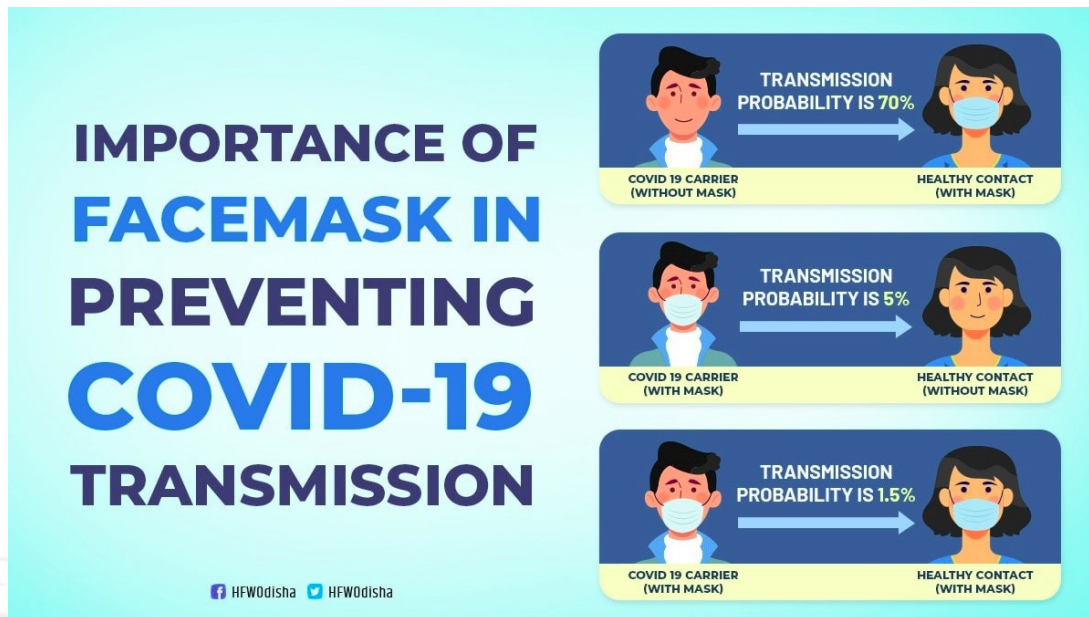
WE CAN SOLVE THIS BY APPLYING TECHNIQUES ON HOW PEOPLE LEARN BEST. CLEARLY PEOPLE DISTRUST NUMBERS AND FIGURES HERE ARE SOME APPROCHES BASED ON HOW PEOPLE LEARN



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

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FOR THE VISUAL LEARNER

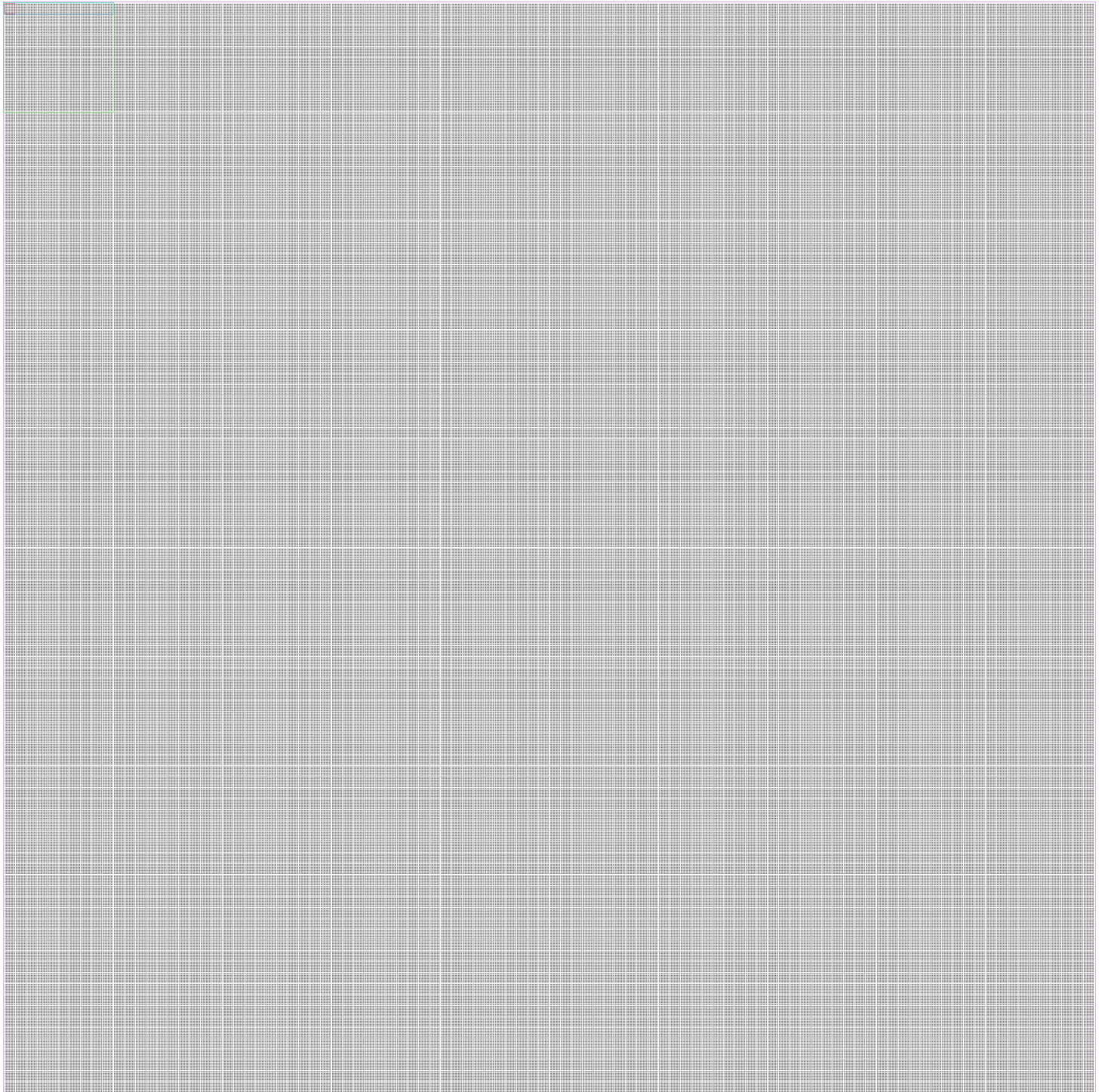




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REPRESENTATION OF DEATHS AS OF MAY 28TH 2020



1: 100,000 DOTS ARE IN THIS IMAGE. EACH DOT IS A HUMAN LIFE THAT HAS BEEN LOST DURING THIS PANDEMIC THREE MONTHS INTO THE PANDEMIC 100,000 ARE DEAD IN USA.



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

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FOR THE DATA DRIVEN INDIVIDUAL

THE CENTER FOR DISEASE CONTROL (CDC) AS OF APRIL THIRD SUGGESTS THAT FACE MASKS SHOULD BE WORN IF AND INDIVIDUAL IS NOT ABLE TO MAINTAIN 6FT TO 10 FT APART FROM EACH OTHER. THIS CHANGE WAS BECAUSE MULTIPLE RESEARCH STUDIES ARE SHOWING THAT SARS-CoV-2 HAS MUTATED INTO A MORE INFECTIOUS VIRUS. SOME OF THE FOLLOWING OBSERVATIONS WERE MADE

SARS-CoV-2 TRANSMISSION TYPES

1. RESPIRATORY DROPLETS – LARGE MUCUS PARTICLES THAT CARRY THE VIRUS WHEN YOU SNEEZE OR COUGH
2. SURFACE TO MOUTH – A SICK PERSON COUGHS ON A SURFACE THEN A HEALTHY PERSON TOUCHES THE SURFACE THEN THE MOUTH
3. AEROSILIZED PARTICLES – THE TINY MATTER WHEN YOU COUGH THAT LINGERS IN THE AIR.

THE FACTS

1. SARS-CoV-2 HAS AEROSILIZED FORM MEANING IT CAN LINGER IN THE AIR FOR UP TO 3 HOURS
2. TRANSMISSION OF THE VIRUS CAN BE SPREAD FROM JUST TALKING
3. NEW RESEARCH HAS SHOW ANY TYPE OF FACE BARRIER REDUCES THE SPREAD OF RESPIRATORY DROPLETS
4. WEARING A MASK HELPS REMIND PEOPLE NOT TO TOUCH THERE FACE.
5. WE DON'T HAVE AN VACCINE
6. UP TO 50% OF PEOPLE WHO CONTRACT THIS VIRUS ARE ASYMPTOMATIC BUT STILL SPREAD THE VIRUS.
7. EVERY TIME THIS VIRUS TRANSFER FROM PERSON TO PERSON IT MUTATES AND POTENTIAL CREATES A MORE INFECTIOUS VIRUS. THIS HAS HAPPENED WITH THIS VIRUS
8. ITS NOT ABOUT WHAT AN INDIVIDUAL WANTS. ITS ABOUT WHATS BEST FOR THE COMMUNITY. IF WE WANT TO STOP THE VIRUS THIS IS HOW WE DO IT
9. RESEARCH IS SHOWING MASKING IS PREVENTING SPREAD. FOR EXAMPLE TWO HAIR DRESSERS EXPOSED 146 PEOPLE TO COVID-19. THEY ALL WORE MASKS AND NO ONE WAS INFECTED.
10. EVEN IF A PERSON HAS A VIRUS AND HAVE ANTIBODIES THIS ANTIBODIES ARE NOT THOUGHT TO LAST MORE A FEW MONTHS.



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FOR THOSE WHO DONT WANT TO REPEAT THE PAST

IN 1917 THE FIRST WAVE OF THE SPANISH FLU INFECTED MANY BUT DID NOT KILL. THE VIRUS MUTATED OVER THE COURSE OF THE NEXT YEAR IT KILLED 50 MILLION. IF ONE SCALES THAT NUMBER UP IT WOULD BE 150 MILLION DEAD IN A SIX MONTH PERIOD



To Prevent Influenza!

Do not take any person's breath.
Keep the mouth and teeth clean.
Avoid those that cough and sneeze.
Don't visit poorly ventilated places.
Keep warm, get fresh air and sunshine.
Don't use common drinking cups, towels, etc.
Cover your mouth when you cough and sneeze.
Avoid Worry, Fear and Fatigue.
Stay at home if you have a cold.
Walk to your work or office.
In sick rooms wear a gauze mask like in illustration.

FIGURE 2: 1919 FLIER POSTED IN MAJOR CITIES OF WAYS TO PREVENT THE FLU. THE WOMEN IN THIS PICTURE DIED LATER THAT YEAR OF THE FLU. IN 1918 THEY WORE GAUZE FACE MASKS WHICH DID NOT PREVENT THE TRANSMISSION

AN OBSERVATION TO MAKE IS UNTIL WE GET A VACCINE ASSUMING ITS EFFECTIVE AND ASSUMING WE CAN VACCINATE OUR POPULATION THE ADVICE FROM 100 YEARS IS STILL THE SAME ADVICE WE HAVE TODAY,



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FOR THE SCIENCE DOUBTER

THIS IS AN EXPERIMENT I DESIGNED PRETENDING IF WE DID HAVE ANY DATA. AFTER READING THIS THE HOPE IS THAT YOU SEE WE HAVE TO ALL WEAR MASKS SINCE IF WERE WRONG AND MASKS ARE USELESS HUNDREDS OF THOUSANDS WILL DIE, BUT IN EVERY OTHER OUTCOME OF THE EXPERIMENT NO ONE DIES.

THE ONLY WAY TO SOLVE THE FACE MASK DEBATE IS TO TEST IT

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Remember

Both sides say they have proof
Both sides say they know there right
Both sides can not convince the other side that there right

And in order to actual know who wins. Which were we agree on everyone has to go by. If half the people do and half the people dont we will never know who was right.

There are four Possible outcomes of the the experiment

People who support Face Mask	There Wrong	No one dies
People who support face masks	There right	Thousands of people live
People who dont suport face masks	There right	No one dies we all agree no one should wear a mask if they can die from it.
People who dont support face masks ?	There wrong	Thousands of people die

These are the only four options we have to do? Options 1 and 3 doesn't give us a result?
Remember one of you are going to be wrong and one is going to be right?
Both say they have proof but one of you guys are wrong?

So we have to choose between In order to determine who is right and who is wrong

To Allow: thousands people to live to do the experiment
Take the chance chance thousands are going to die in this experiment

I think both sides agree we shouldn't take the chance. If you are right no one dies but if you are wrong thousands will die

Lets do the this experiment Lets see who is right and who is wrong. But lets do it the safest way



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE **INTO MOST EFFECTIVE CLOTH MASK**

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FOR THE STUBBORN LOUD ONES

THE STRONGEST MESSAGE FOR PEOPLE WHO ARE LOUD DISRUPTIVE IS TO WEAR OUR MASK SILENTLY FOR THE PRACTICAL REASON THAT THEY ARE NOT WEARING A MASK AND COULD HAVE THE VIRUS. DON'T ENGAGE. IGNORE AND GO ABOUT YOUR BUSINESS. BY DOING THIS IT SENDS A STRONGER MESSAGE. EVERY TIME SOMEONE WEARS A MASK IT SHOWS SOMETHING IS WRONG HERE. THERE IS SOMETHING REALLY WRONG HERE. THAT THE MAJORITY ARE DOING THE RIGHT THING. THE BEST MESSAGE IS TO SHOW YOU SUPPORT THE DATA AND EVIDENCE. IF ENOUGH PEOPLE WHO ARE MISINFORMED GOOD PEOPLE WILL SEE AND HOPEFULLY RESEARCH AND REALIZE THEY WERE MISLEAD AND START WEARING A MASK. FOR THOSE DRIVING THIS FALSE INFORMATION THEY WILL LOOSE THEIR SUPPORT AND EVENTUALLY BECOME OUTLIERS.





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

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PART 2: CURRENT FACE MASK INFORMATION

THIS SECTION WILL GO OVER THE THREE TYPES OF FACE MASKS. THEIR CHARACTERISTICS CLEANING METHODS AND OTHER INFORMATION ABOUT EACH TYPE OF MASK IN GENERAL FACE MASKS CAN BE DIVIDED INTO THREE CATEGORIES.

1. RESPIRATORS
2. SURGICAL MASKS
3. CLOTH MASKS



3: N95 MASK



5: PLETED CLOTH MASK



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ANY FACE WITH A VALVE

DO NOT USE.....

THESE FACE MASKS SPREAD THE VIRUS. THE PRIMARY PURPOSE OF ANY FACE MASK IS TO PREVENT YOUR GERMS FROM SPREADING TO OTHER PEOPLE. MASKS WITH VALVES EXPEL YOUR DROPLETS DIRECTLY INTO THE AIR. WORSE THOUGH THE PUSH THEM OUT FURTHER AND FASTER.

EVEN THE N95 MASKS WITH VALVES SHOULD NOT BE USED. THESE MASKS WERE NEVER MEANT TO BE USED DURING A PANDEMIC. THEY ARE NOT MEDICAL GRADE. THEY WERE USED FOR OTHER CHEMICALS.





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WITH ALL MASKS

WHEN TAKING MASKS ON AND OFF

1. WASH YOUR HANDS
2. REMOVE MASKS FROM STRAPS
3. NEVER TOUCH THE INSIDE OF MASK WITH HANDS OR ANY SURFACE
4. ALWAYS STORE IN A BAG NEVER LOOSELY IN A PURSE

HOW OFTEN CAN I WEAR A MASK BEFORE CLEANING

1. IF YOUR MASK IS WASHABLE IT SHOULD BE WASHED EVERY NIGHT
2. IF POSSIBLE DISPOSABLE MASKS SHOULD ONLY BE WORN ONCE UNLESS OTHERWISE DIRECTED

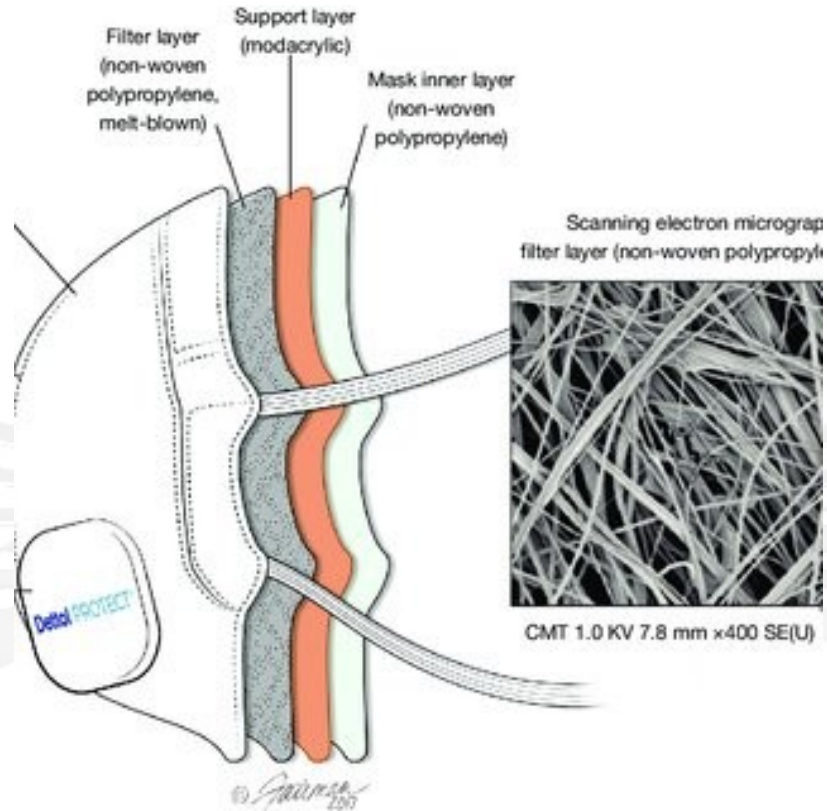


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RESPIRATORS

A RESPIRATOR REQUIRES SOME SORT OF FIT TESTING THAT ENSURES THAT SEAL AROUND YOUR FACE IS AIRTIGHT. THESE ARE USED FOR INFECTIOUS DISEASE SITUATIONS. THE AMERICAN VERSION IS CALLED THE N95 MASK. THE EUROPEAN VERSION IS CALLED FFP3 AND THE CHINESE VERSION IS THE KN95. THESE MASKS ARE ABLE TO BE FOUND. ALL COUNTRIES ARE PRIORITIZING THEM. IF YOU SEE ADS ON EBAY OR AMAZON THEY ARE NOT LEGIT EVEN IF THEY APPEAR TO BE WITH THE 3M LOGO ON THEM





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CHARACTERISTICS

KEY	VALUE
MATERIALS	MELT BLOWN POLYPROPYLENE
DISPOSABLE / REUSABLE	DISPOSABLE BUT REUSABLE IF MUST
PREVENTS INHALATION OF AEROSILIZED PARTICLES	95%
PREVENTS INHALATION OF AIRBORNE DROPLETS	95%
PREVENTS EXHALED DROPLETS FROM EXITING	99%
PREVENTS EXHALED AEROSILIZED PARTICLES EXITING	99%
CLEANING OF MASK	UVC LIGHT (NOT AVAILABLE TO PUBLIC) OXIDIZE HYDROGEN PEROXIDE NOT AVAILABLE TO PUBLIC NATURAL CLEANING- PLACE MASK IN A BROWN PAPER BAD AND LET SIT FOR SEVEN DIES. THE VIRUS DEACTIVATES THEN

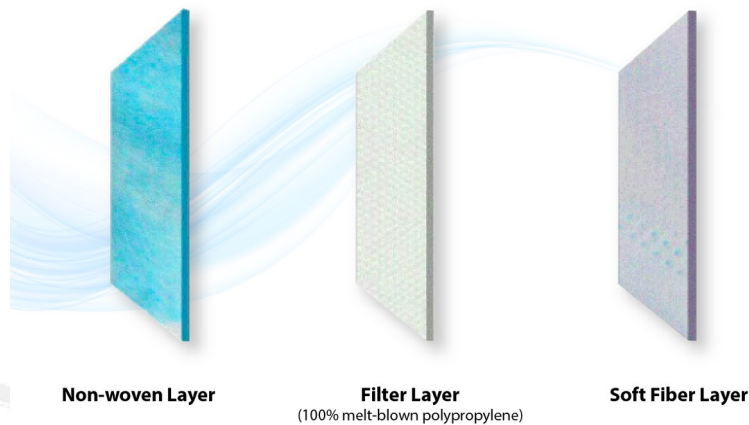


COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

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SURGICAL MASKS

THESE ARE THE BLUE PAPER LIKE THREE LAYERED MASKS YOU SEE IN DOCTORS OFFICES. THIS MASK IS NOT MEANT TO PROTECT YOU FROM AIR BORNE PARTICLES. INSTEAD ITS TO PROTECT OTHERS BY TRAPPING DROPLETS FROM EXITING THE MASK.



6: NON WOVEN LAYER IS ELECTROSTATICALLY CHARGED. (ELECTROSTATIC FILTER). THE MIDDLE LAYER IS A MECHANICAL FILTER THE INNER MOST LAYER IS SKIN FRIENDLY

SURGICAL MASK INFORMATION TABLE

KEY	VALUE
MATERIALS	TWO LAYERS OF WATERPROOF NON WOVEN POLYPROPYLENE. ONE INNER LAYER OF MELTBLOWN POLYPROPYLENE
DISPOSABLE / REUSABLE	DISPOSABLE
PREVENTS INHALATION OF AEROSILIZED PARTICLES	DEPENDS ON FIT
PREVENTS INHALATION OF AIRBORNE DROPLETS	DEPENDS ON FIT
PREVENTS EXHALED DROPLETS FROM EXITING	DEPENDS ON FIT
PREVENTS EXHALED AEROSILIZED PARTICLES EXITING	DEPENDS ON IT

CLEANING

THESE ARE NOT MEANT TO BE CLEANED. IF YOU MUST RE-WEAR, PUT THEM IN A BROWN PAPER BAG AND LEAVE THEM ALONE FOR 7 DAYS. THE VIRUS ONLY CAN LIVE ON SURFACES FOR A MAX OF 7 DAYS. HOWEVER ONCE THE MASK IS WET AND SOILED IT REALLY LOOSES IT EFFICIENCY.



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

CLOTH MASK

BEFORE COVID PEOPLE IN ASIA WOULD WEAR THESE MASKS TO PREVENT INHALATION OF POLLUTION. THESE ARE THE MASKS CDC SUGGESTS TO WEAR OUT DOORS. EVALUATED HERE IS A SINGLE LAYER OF 100% COTTON HERE. THERE ARE THREE STRUCTURAL DESIGN TYPES THAT ARE DESCRIBED IN THE DESIGN SECTION.

CLOTH STRUCTURAL DESIGNS

1. *TRADITIONAL DESIGN* -FLAT PIECE OF FABRIC AGAINST THE FACE. THESE ARE EASY TO MAKE CHEAP TO BUY BUT DOES NOT FIT THE FACE WELL.



2. *OLSON MASK* – CURVED TO ADHERE TO YOUR FACE. BEST FITTING MASK IF ITS CUSTOM MADE, BUT NO ONE SIZE FIT ALL. ALSO MOST EXPENSIVE



3. *PLEATED MASK* – MASK THAT HAS SLITS IN IT TO ALLOW THE MASK TO STRETCH. THIS IS BETWEEN THE OTHER TWO AND I LIKE THIS ONE SINCE I CAN MAKE IT MY SELF. THIS MASK ALSO ALLOWS FOR A FILTER





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

CHARACTERISTICS

CLOTH MASK CHARACTERISTICS	ANSWER
DESCRIPTION	MASKS MADE OUT OF FABRICS THAT ANYONE IN THE GENERAL POPULATION CAN BUY
DISPOSABLE / REUSABLE	REUSABLE PARTS AND DISPOSABLE PARTS
PREVENTS INHALATION OF AEROSILIZED PARTICLES	DEPENDS ON MATERIAL FIT AND BREATH-ABILITY
PREVENTS INHALATION OF AIRBORNE DROPLETS	DEPENDS ON MATERIAL FIT AND BREATH-ABILITY
PREVENTS EXHALED DROPLETS FROM EXITING	DEPENDS ON MATERIAL FIT AND BREATH-ABILITY
PREVENTS EXHALED AEROSILIZED PARTICLES EXITING	DEPENDS ON MATERIAL FIT AND BREATH-ABILITY

CLEANING

THESE CAN BE WASHED IN A WASHING MACHINE BUT SHOULD NOT BE PUT IN THE DRYER. DRYING WILL DETERIORATE THE FABRIC.

IF HAND WASHED ALLOW FABRIC TO SOAK IN SOAPY WATER FOR AT LEAST 20 MINUTES. THIS WILL DEACTIVATE THE VIRUS BY TEARING APART ITS FATTY LAYER. LAUNDRY SANITIZER IS ENCOURAGED TO KILL ANY OTHER BACTERIA ON THE MASK. MUST CLEAN AFTER YOU USE IT IF YOU ARE USING DISPOSABLE FILTERS EITHER NATURALLY CLEAN BY LETTER MASK SIT FOR 7 DAYS IN A PAPER BAG OR DISPOSE OF THE MASK



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

PART 3: ANALYZING CLOTH MASK DESIGN

INTRODUCTION

WELCOME TO THE BULK OF THIS PAPER. THIS IS A KNOWLEDGE SHARE FROM SOMEONE WHO IS OBSESSED WITH FACE MASKS TO ANYONE WHO IS WILLING TO LISTEN. I WANT TO FIRST RESTATE THE ABSTRACT

“FILTRATION IS NOT THE MOST IMPORTANT PART OF ANY MASK. EQUALLY IF NOT MORE IMPORTANT IS MASK FIT AND BREATH-ABILITY BASED ON THE PRINCIPLE “AIR TAKES THE PATH OF LEAST RESISTANCE”. IF A MASK DOES NOT HAVE TIGHT FIT, AIR WILL GO AROUND THE MASK. NO MASK WILL EVER HAVE A PERFECT SEAL UNLESS FIT TESTED. A MASK WITH GAPS AND GREAT FILTRATION CAN FILTER NOTHING AND ALL THE AIR GOES AROUND THE MASK. IN ADDITION IS SOMEONE CANT BREATH WITH THE FILTRATION THEY WONT WEAR THE MASK. MANY PEOPLE ARE USING MASKS THAT AREN’T EFFECTIVE EVEN THOUGH THEY ARE USING GREAT FILTRATION. A MASK WILL NOT”

THE OVERALL PICTURE

1. A GOOD MASK MUST BE DESIGNED FOLLOWING THE PRINCIPLE “AIR TAKES THE PATH OF LEAST RESISTANCE
2. A GOOD MASK NEEDS TO IS JUDGED ON THREE CHARACTERISTICS THAT FOLLOW THE PRINCIPLE
 1. FILTRATION – HOW WELL IT TRAPS PARTICLES
 2. FIT – HOW IS THE SEAL AROUND FACE
 3. BREATH-ABILITY – CAN YOU STILL BREATH



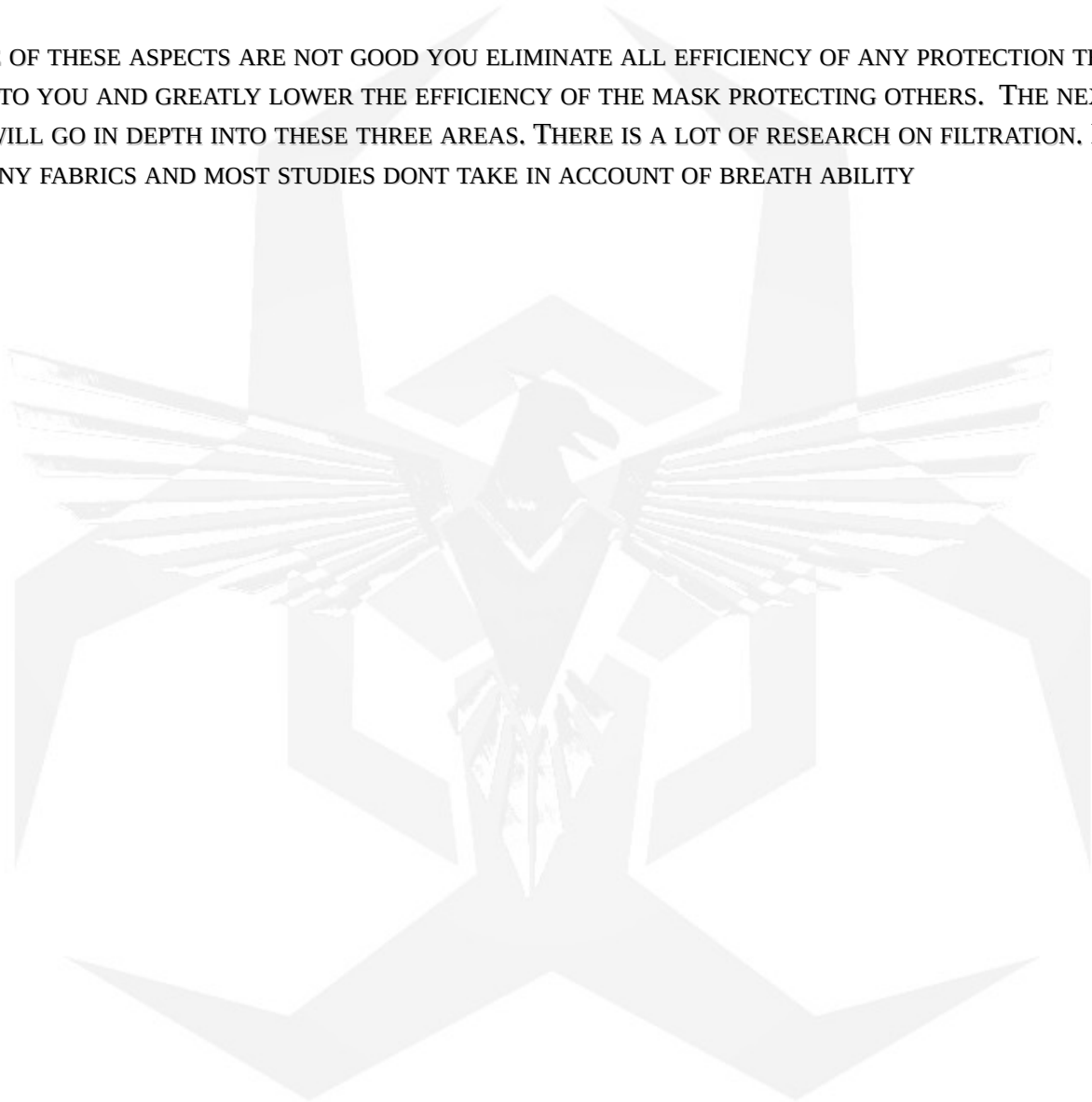
COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE **INTO MOST EFFECTIVE CLOTH MASK**

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

AIR TAKES THE PATH OF LEAST RESISTANCE

WHEN THINKING ABOUT OR READING A STUDY ONE MUST TAKE IN ACCOUNT OF IF THE STUDY TAKES IN CONSIDERATION OF THIS. MOST STUDIES PUT A FABRIC OVER A AIR PUMP THAT CAN PUMP OUT DIFFERENT AMOUNTS OF AIR TO REPRESENT SNEEZING COUGHING BREATHING. MIND YOU THIS AIR HAS SARS-CoV-2 SO ITS NOT DONE USING A PERSON. THE STUDIES DONT IN ACCOUNT PEOPLE FACE STRUCTURE AND HOW THEY ARE DIFFERENT WHICH CAN LEAD TO GAPS WHICH AIR WILL AIR TAKES THE PATH

IF ANY ONE OF THESE ASPECTS ARE NOT GOOD YOU ELIMINATE ALL EFFICIENCY OF ANY PROTECTION THE MASK GAVE GIVE TO YOU AND GREATLY LOWER THE EFFICIENCY OF THE MASK PROTECTING OTHERS. THE NEXT THREE SECTIONS WILL GO IN DEPTH INTO THESE THREE AREAS. THERE IS A LOT OF RESEARCH ON FILTRATION. I HAVE TESTED MANY FABRICS AND MOST STUDIES DONT TAKE IN ACCOUNT OF BREATH ABILITY





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

FIRST ASPECT OF A GOOD MASK: FILTRATION

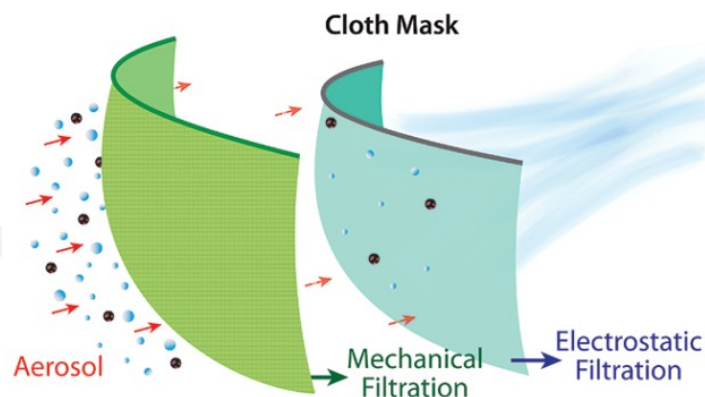
THE STUDIES ARE IN. MULTIPLE STUDIES HAVE DETERMINED WHICH FABRICS ARE BEST AT FILTERING OUT PARTICLES. REMEMBER ALL STUDIES THAT THIS DOCUMENT ARE REFERRED TO ARE LINKED IN THE DISCLAIMER SECTION. FIRST LETS TAKE A MINUTE AND LEARN ABOUT DIFFERENT FILTERS.

TYPES OF FILTERS

1. **MECHANICAL FILTER** – ACTUALLY PHYSICALLY TRAPS THE VIRUS ON THE MATERIAL THROUGH COLLISION THIS WORKS WELL WITH LARGER DROPLETS
2. **ELECTROSTATIC FILTER** – THE NEGATIVE CHARGED FABRIC ATTACHES IT SELF THROUGH THE VIRUS (THE BLUE MATERIAL ON A SURGICAL MASK IS NEGATIVE CHARGED) THIS IS WHY WE CAN WASH THEM. THIS IS GOOD FOR SMALLER PARTICLES.
3. **HYBRID FILTERS** – A COMBINATION OF EFFECTIVE MECHANICAL OR COLLISON AND ELECTROSTATIC ATTRACTION FILTERS.

SO MECHANICAL FILTERS CAN FILTER OUT LARGE DROPLETS AND THE ELECTROSTATIC FILTERS FILTER OUT THE AEROSOL PARTICLES. THIS IS WHY N95 AND SURGICAL MASKS ARE NOT ABLE TO BE WASHED OR REUSED.

A GOOD MASK FILTRATION SHOULD HAVE BOTH MECHANICAL AND ELECTROSTATIC FILTERS.





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE **INTO MOST EFFECTIVE CLOTH MASK**

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

MECHANICAL FILTERS

THESE ARE USUALLY FABRIC FILTERS. THE BEST COMBINATION BASED ON THE CURRENT STUDIES ARE TWO LAYERS OF QUILTERS COTTONS. SOME STUDIES SHOW OTHER FABRICS LIKE 600 THREAD COUNT PILLOW CASE IS BETTER, HOWEVER THAT IS NOT A BREATHABLE FABRIC.

MECHANICAL FILTER PROPERTY TABLE

PROPERTY	VALUE	RATIONAL
WHAT SIZE PARTICLE THEY TRAP	LARGE DROPLETS. PARTICLES THAT TRAVEL 6 FEET AND FALL WITHIN MINUTES.	MECHANICAL FILTERS ARE COLLISION BASED. THE VIRUS GETS TRAPPED WITH IN A MATERIAL PURELY BY COLLISION
SET BACKS	THEY ARE DISPOSABLE UNLESS NATURALLY CLEANED	WASHABLE REUSABLE UNTIL THE MATERIAL RIPS OR THERE IS A HOLE IN THEM
CLEANING	MACHINE WASH IF YOU CANT HAND WASH. ALLOW TO SIT IN DETERGENT FOR 20 MINUTES. THEN RINSE AND IF YOU WANT USE A SANITIZER TO KILL BACTERIA ON THE FABRIC.	THE DETERGENT IS CHARGED AND THE VIRUS IS NEGATIVELY CHARGED SO IT PULL THE VIRUS OFF THE FABIRC ONTO DETERGANT. SAME WAY FOR OTHER CLOTHES AND DIRT ON DISHES
LIFESPAN	UNTIL FABRIC TEARS OR RIPS	AS LONG AS THE MATERIAL IS SOUND THEY SHOULD LAST A LONG TIME.
BEST FABRIC FOR THIS.	TIGHTLY WOVEN QUILTERS COTTON	NATURAL FIBER LIKE COTTON HAS BEEN SHOWN TO BE MOST EFFECTIVE.
WHERE IN MASK SHOULD I PUT IT	THE OUTER AND FIRST LAYER OF MASK	THE FILTER NEEDS TO BE PROTECTED FROM MOISTURE. SO THE INNER MOST LAYER OF COTTON ABSORBS SPIT FROM YOU. THE OUTER MOST LAYER CAN BE WATERPROOFED WITH SCOTCH GUARD ADDED WATER PROOF PROTECTION FROM OUTSIDE MOISTURE AND DROPLETS
MECHANICAL = PHYSICAL	PHYSICAL = COLLISION BASED	COLLISON BASED FILTER DROPLETS



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE **INTO MOST EFFECTIVE CLOTH MASK**

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

TAKEAWAYS

- SHOULD BE USED AS THE MASK IN SELF. NOT IN THE FILTER PART OF THE MASK.
- MECHANICAL FILTERS TRAP LARGE DROPLETS THROUGH COLLISIONS THE VIRUS PHYSICALLY GET TRAPPED
- TIGHTLY WOVEN COTTON IN STUDIES HAVE SHOWN TO BE MOST EFFECTIVE.
- WATERPROOF THE OUTER MOST LAYER WITH SCOTCH GUARD





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

ELECTROSTATIC FILTERS

SHOULD BE USED AS PART OF THE FILTER. IF YOU SEW IT PHYSICALLY IN THE MASK AND WASH YOU ONLY GET ABOUT 10 LIFE SPANS OUT OF THEM

ELECTROSTATIC FILTER PROPERTY TABLE

PROPERTY	VALUE	RATIONAL
WHAT SIZE PARTICLE THEY TRAP	SMALL AEROSOLIZED PARTICLES. THE ONES THAT LINGER IN THE AIR FOR HOURS	THIS IS THE SAME WAY DETERGENTS WORK. THE VIRUS IS POSITIVELY CHARGED. THE FABRIC IS NEGATIVELY CHARGED. WHEN THE VIRUS PASSES THROUGH THE FABRIC THROUGH ELECTROSTATIC ATTRACTION THE VIRUS GETS STUCK IN THE FABRIC.
SET BACKS	THEY ARE DISPOSABLE UNLESS NATURALLY CLEANED	OVER TIME AND WASHES FABRICS LOOSE THEIR CHARGE. SO ULTIMATELY THEY SHOULD ONLY BE USED ONCE. THE ONLY OTHER APPROVED WAY THE GENERAL PUBLIC CAN USE TO CLEAN THEM. IS TO ALLOW THE VIRUS TO NATURALLY DEACTIVATE.
CLEANING	PLACE IN BROWN PAPER BAG FOR SEVEN DAYS AND ALLOW VIRUS TO DEACTIVATE NATURALLY	THEY HAVE TO BE MAN MADE. SO COTTON WOULD NOT TRAP AEROSOLS
LIFESPAN	UNTIL FABRIC BECOMES MOIST FROM YOUR SPIT	ONCE FABRICS BECOME MOIST THEY LOOSE THEIR CHARGE.
BEST FABRIC FOR THIS.	STRETCH CHIFFON	POLYESTER BASED FABRIC AND HOW ITS WOVEN STUDIES SHOW THAT ITS BEST TO BE USED IN A FILTER.
ELECTROSTATIC = ATTRACTION	ATTRACTION = CHARGES	CHARGES ATTRACT AEROSOLS

ELECTROSTATIC TAKEAWAYS

- THIS IS WHY MASKS HAVE FILTER POUCHES SINCE THE FABRIC CAN NOT BE WASHED
- THIS ACCOUNTS FOR AEROSOL PARTICLES WHICH IS IMPERATIVE SINCE CDC NOW SAYS VIRUS CAN LINGER IN THE AIR FOR LONG PERIODS OF TIME
- STRETCH CHIFFON IS BEST FABRIC FOR THIS RESEARCH SHOWS. ALSO IT DOES NOT DAMPER BREATHING ABILITY.
- WATER PROOFING YOUR FILTER BY ADDING POLYPROPYLENE LAYER WHICH ARE USED IN SURGICAL MASKS NOT ONLY ALLOWS THE LIFE OF THE FILTER TO GREATLY IMPROVE BUT ALLOWS YOU TO DISINFECT THE OUTSIDE OF THE FILTER WITH A CLEANER REMOVING SOME OF THE VIRUS INSTANTLY.



COMBINING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

HYBRID FILTERS

HYBRID FILTERS COMBINE BOTH THE BEST OF MECHANICAL FILTERS AND ELECTROSTATIC FILTERS. HOWEVER SINCE THERE IS A ELECTROSTATIC COMPONENT TO THEM. THEY SHOULD BE USED IN THE FILTER PART OF THE MASK. THESE ARE SCIENTIFICALLY PROVEN FABRICS OR MATERIALS THAT WILL FILTER OUT PARTICLES BY SIZE. AN EXAMPLE OF THIS WOULD BE A HEPTA FILTER. THE WAY THESE ARE RATING IS BY THE MERV RATING

MERV RATING

MINIMUM EFFICIENCY REPORTING VALUES, OR MERVs, REPORT A FILTER'S ABILITY TO CAPTURE LARGER PARTICLES BETWEEN 0.3 AND 10 MICRONS (MM).

- THIS VALUE IS HELPFUL IN COMPARING THE PERFORMANCE OF DIFFERENT FILTERS
- THE RATING IS DERIVED FROM A TEST METHOD DEVELOPED BY THE AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS (ASHRAE) [SEE WWW.ASHRAE.ORG].
- THE HIGHER THE MERV RATING THE BETTER THE FILTER IS AT TRAPPING SPECIFIC TYPES OF PARTICLES





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

MERV Rating	Average Particle Size Efficiency in Microns
1-4	3.0 - 10.0 less than 20%
6	3.0 - 10.0 49.9%
8	3.0 - 10.0 84.9%
10	1.0 - 3.0 50% - 64.9%, 3.0 - 10.0 85% or greater
12	1.0 - 3.0 80% - 89.9%, 3.0 - 10.0 90% or greater
14	0.3 - 1.0 75% - 84%, 1.0 - 3.0 90% or greater
16	0.3 - 1.0 75% or greater

MERV 13 IS THE GENERALLY ACCEPTED FILTRATION THAT IT WOULD FILTER OUT ENOUGH VIRUS PARTICLES THAT THE REMAINING WOULD NOT BE ENOUGH TO CAUSE INFECTION. NYS RECENTLY REQUIRED ALL LARGE BUILDINGS TO PUT MERV FABRIC IN THEIR VENTILATION



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

SECOND ASPECT OF GOOD MASK: FIT /AIR LEAKAGE

HOW WELL THE MASK FITS ON OUR SPACE HOW MUCH AIR IS GOING UP AND AROUND THE MASK AND TO THE SIDES. ANY AIR GAP IN A MASK WILL REDUCE ITS EFFICIENCY OF AEROSILIZED PARTICLES BY 90%. BOTTOM LINE IF MASK IS NOT SNUG YOUR NOT GETTING ANY PROTECTION OR PROTECTING OTHERS

WARNING SIGNS YOUR MASK IS NOT FITTING WELL

1. PUT ON A PAIR OF GLASSES, IF THEY FOG UP YOU HAVE A FITTING PROBLEM
2. YOU ARE ABLE TO BREATH 100% NORMAL. FILTERS FROM THE MASK SHOULD MAKE IT SLIGHTLY HARDER TO BREATH. IF ITS TO EASY TO BREATH THEN MAY MEAN YOU HAVE A GAP.
3. NOT FEELING COMPRESSION WHEN YOU BREATH IN.
4. PRESS MASK AGAINST YOUR FACE TIGHT SO YOU CREATE A SEAL . IF YOUR ARE NOT ABLE TO BREATH THAT MEANS THE FILTRATION MAY BE GREAT BUT ALL THE AIR IS GOING AROUND THE MASK.

HOW TO ACHIEVE A BETTER FIT

1. MULTIPLE LAYERS APPEAR TO PRESS THE MASK ON BETTER
2. THE GOAL ISN'T TO PRESS THE MASK INTO YOUR FACE. THE GOAL IS WHEN YOU BREATH IN THE MASKS LOCKS TO YOUR FACE. SO EVEN PRESSURE ALL THE WAY AROUND IS KEY
3. SKIN TAPE CAN BE USED BUT USUALLY IF YOU ARE WORKING DIRECTY WITH PATIENTS
4. SURGICAL MASK ALWAYS GOING ABOVE A CLOTH MASK SEEMS TO HELP.
5. PUT A NAPKIN WITH SMALL HOLES IN IT AGAINST YOUR SKIN WHEN YOU PUT ON A MASK IT CAN HELP BUILD IT UP AND MAKE A TIGHTER SEAL
6. ADJUST STRAPS OF THE FACE MASK. YOU CAN MAKE YOUR OWN STRAPS USING TWO BEADS. THAT WILL BE LATER IN THE DOCUMENT
7. PUT A PAPERCLIP OR THIN METAL TO CREATE TENSION ON BRIDGE OF NOSE.

IT SHOULD BE NOTED ANY MASK WITH ANY FIT WILL SIGNIFICANTLY BLOCK LARGE DROPLETS FROM LEAVING THE MASK. THIS PROTECTS OTHER PEOPLE. THIS DOCUMENT IS GEARED TO ALSO PREVENT THE VIRUS FROM GETTING THROUGH THE MASK. ANY FACE COVERING IS BETTER THEN NO FACE COVERING.

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COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

THIRD ASPECT OF A GOOD MASK: BREATH ABILITY

WHEN I STARTED CREATING MASKS I WAS TESTING OUT ALL SORTS OF FABRICS. ONE OF THE BIGGEST WASTES OF MONEY WAS I WOULD NOT WEAR A MASK FOR MORE THEN FIVE MINUTES. I AM DEDICATING THIS AS A ENTIRE SECTION SINCE MY EXPERIENCE WAS I PANICKED I WOULD LOOK UP A STUDY AND THEN GO GET THE FABRICS. IW WOULD MAKE A MASK AND THINK

NON BREATHABLE FILTRATION FABRICS

MATERIAL	REASON
ANY THREAD COUNT GREATER THEN 400	TESTED
SHOWER CURTAIN (POLYESTER)	TESTED
SATIN	TESTED
MELT BLOWN POLYPROPYLENE	IS NOT WHEN THERE ISNT A AIR LEAKAGE

BREATHABLE FILTRATION FABRICS

MATERIAL	PROPERTIES
QUILTERS COTTON	BEST FILTRATION FOR MECHANICAL FILTERS
POLYPROPYLENE	WATERPROOF NON WOOVEN FABRIC USED FOR SURIGICAL MASKS
CHIFFON	90% POLYESTER 10% SPANDEX BEST FOR ELECTROSTATIC FILTRATION
MERV 13 FABRIC	BEST FABRIC ON AMAZON FOR THE BUCK
SWIFTER DRY MOP REFILLS	ALTERNATIVE FOR MERV 13 FABRIC



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

PART 4: RESEARCH STUDIED MASK & FILTER DESIGN

OVERVIEW

IN EARLIER VERSIONS I CREATED A MASK WITH A FILTER POCKET AND ONE MASK WITHOUT A FILTER POCKET. WITH THE INFORMATION THAT HAS COME OUT THAT THE VIRUS IS AIRBORNE A FUNDAMENTAL PRINCIPLE EVERYONE SHOULD KNOW IS IF THE MASK DOESN'T HAVE A FILTER POCKET THROW IT OUT. ,

THE DESIGN

1. ALL MASKS SHOULD HAVE THE MASK IT SELF AND THEN A FILTER.
2. THE MASK IT SELF SERVES AS A STRUCTURAL PIECE AND IS LAYERED WITH MECHANICAL FILTERS. ITS WASHABLE AND REUSABLE
3. THE FILTERS VARY BASED ON WHAT ELECTROSTATIC OR HYBRID MATERIAL IT USES. TO PRESERVE LIFE OF FILTER WE LAYER NON WOVEN POLYPROPYLENE TO WATER PROOF THEM

BELOW IS A TABLE OF THINGS THAT I AM DOING DIFFERENTLY BECAUSE OF BREATH ABILITY AND AIR LEAKAGE THEN WHAT THE RECOMMENDED FILTRATION IS.

RESEARCH RECOMMENDS	ISSUE IN TESTING	RESOLUTION
TWO LAYERS OF QUILTER	TWO LAYERS MECHANICAL FILTERS. THERE ARE NO ELECTROSTATIC TO ATTACH SMALLER PARTICLES BY CHARGE. ALSO TWO LAYERS ARE DIFFICULT TO BREATH IN. IN ADDITION QUILTERS COTTON IS STIFF AND NOT STRETCHY	REPLACING THE FACE SIDING PIECE OF OF QUILTERS COTTON WITH KNIT COTTON. THIS WILL ALLOW IT TTO FIR ON THE FACE BETTER AND SICNE WE HAVE FILTER THE LESS MECHANCAILFILTER SHOULD NOT THE THAT BAD.



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

SPECIFICATION SHEET

To use lookup table pick a vertical component and a horizontal property. Then take the Abbreviation and look it up in the abbreviation table More info at https://archive.org/stream/covid_resources/face_masks_current Section 5

LOOKUP TABLE

COMPONENT	PROPERTIES	CLEANING	LIFESPAN	MATERIALS USED	LAYER ORDER (AIR ... FACE)
Face Mask	P1 F1	C3	LS2	M2 M3	M3 Filter Option M2
Filter Option 1 (Gold Rivet)	P2 F2	C1 if not C2	LS1	M3 M4 M5	M3 M4 M5 M4 M3
Filter Option 2 (Silver Rivet)	P2 F2	C1 if not C2	LS1	M3 M4 M6	M3 M4 M6 M4 M3

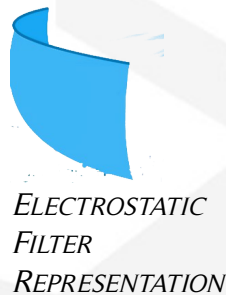
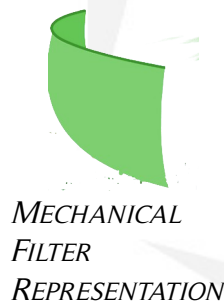
ABBREVIATION TABLE

KEY	VALUE	RATIONAL / COMMENT
C1	Place in brown paper bag let sit for 6 days	Time for virus to deactivate
C2	Spray disinfectant on towel and wipe	If Filter use C1 this only in emergencies
C3	Machine wash or soak in detergent for 20 min then air dry	20 minutes time for virus to deactivate
LS1	Until inner fabric is compromised gets wet (Filters)	Once fabric is wet loses its efficacy
LS2	Mask has any visible holes	Mask is no longer effective
F1	Mechanical Filter – Traps particles through collisions	Large Droplets get stuck in fabric by collision
F2	Electrostatic filter - Traps particles through charge	Aerosol Particles are attracted to negatively charged filter
F3	Hybrid Filter	Combination of two filters
M1	Tightly Woven Quilters Cotton (Waterproof)	Research suggests best mechanical filter
M2	Tightly Knit Cotton	Breathable and stretches to face.
M3	Stretch Chiffon	Naturally charged fabric, Best electrostatic filter
M4	Polypropylene	Waterproof breathable both N95 and Surgical masks have this.
M5	MERV 13 Fabric	Fabric NYS is requiring in ventilation that can trap virus from being released into air.
M6	Swiffer Dry mop refill pads	Charged disposable fabric similar consistence to MERV 13
P1	Washable / Reusable	Mask are made out of these, there mechanical filters so they can be washed
P2	Cleanable / Disposable	If you wash the filter it loses its electrostatic charge becoming useless.

TOOK OUT REST OF INFORMATION SINCE IT WAS OUTDATED WILL CONTINUE TO WORK ON

GENERAL GUIDELINES WHEN LAYERING A MASK

THE FOLLOWING COLOR SCHEME WILL IDENTIFY MAJOR FILTER TYPES. GREEN WILL BE MECHANICAL, BLUE ELECTROSTATIC AND PURPLE WITH BY A HYBRID





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

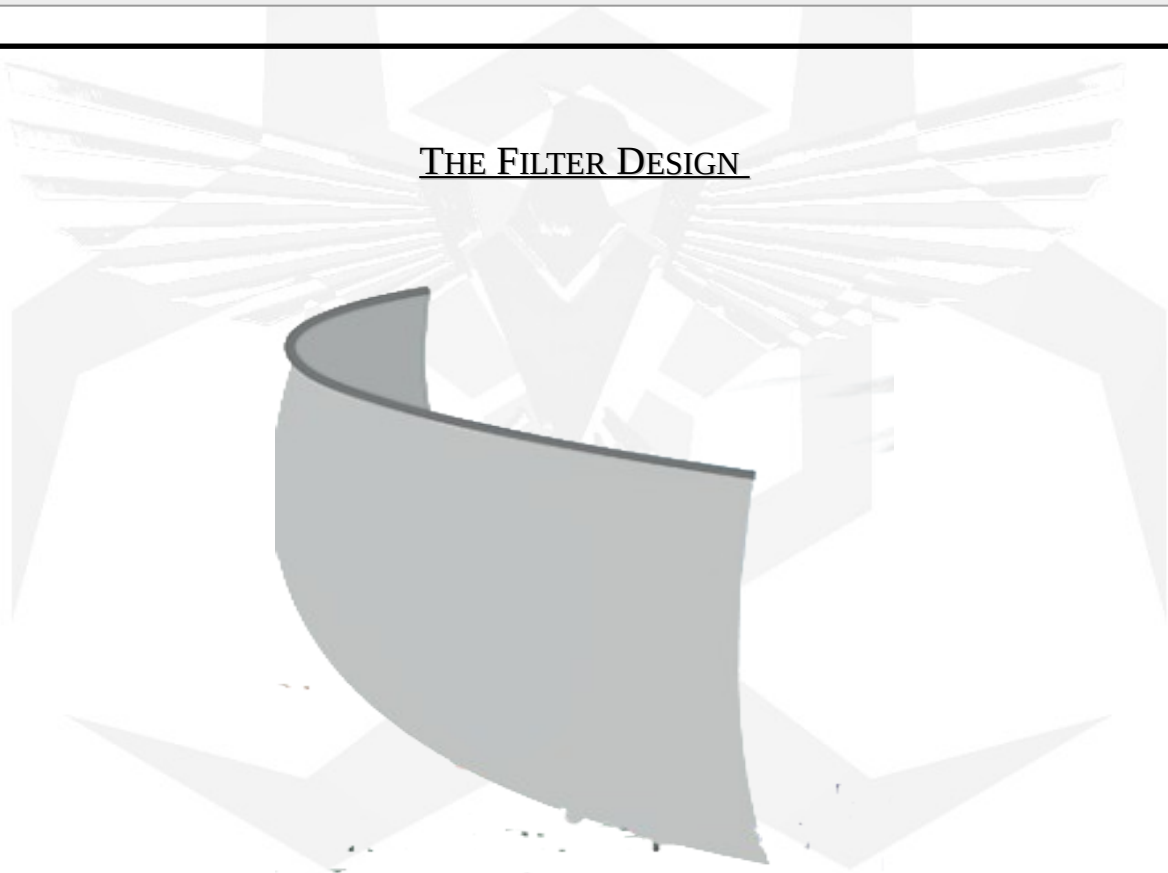
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LAYER DEFINITIONS

EACH LAYER WILL BE PRESENTED BY THREE SIX LETTERS. THE FIRST SPECIFYING THE TYPE OF FILTER. THE SECOND THE FABRIC AND FINALLY WHETHER THE FABRIC IS WASHABLE CLEANABLE REUSABLE OR DISPOSABLE. PLEASE SEE BELOW FOR TABLE REPRESENTATION OF THE LAYERS

KNIT COTTON	MECHANICAL FILTER QUILTERS COTTON REUSABLE WASHABLE
TIGHTLY WOVEN QUILTERS COTTON	MECHANICAL FILTER KNIT COTTON REUSABLE WASHABLE
POLYPROPYLENE	ELECTROSTATIC FILTER POLYPROPYLENE CLEANABLE DISPOSABLE
CHIFFON	ELECTROSTATIC FILTER CHIFFON WASHABLE REUSABLE
SWIFTER DRY MOP REFILLS	HYBRID FILTER DISPOSABLE
MERV 13 FABRIC	HYBRID FILTER DISPOSABLE

THE FILTER DESIGN





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

THE FILTER OF THE MASK IS A HYBRID FABRIC EITHER MERV 13 OR SWIFFTER DRY MOP REFILL SURROUNDED BY THE POLYPROPYLENE.

THIS MASK BECOMES USELESS WHEN IT GETS WET THATS WHY WE SURROUND IT WITH POLYPROPYLENE. THIS WAY IT CAN BE REUSED MORE THEN ONCE AFTER CLEANING.

CLEANING SHOULD BE DONE BY PLACING THE FILTER IN A BROWN PAPER BAG FOR 7 DAYS, THIS ALLOWS THE VIRUS TO DEACTIVATE.

THE MASK DESIGN





COMBINING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

PART 5: RISK ANALYSIS FOR MASK WEARING

INTRODUCTION

THE CDC IS RECOMMENDING FACE COVERINGS WHENEVER INDOORS WITH PEOPLE THAT YOU DON'T LIVE WITH. THE LEVEL OF PROTECTION OF FACE MASK IS DEPENDENT ON A LOT OF FACTORS. ITS NOT REALIASTIC EVERYONE IS GOING TO WEAR THE BEST FACE MASK SINCE ITS UNCOMFORTABLE. THIS SECTION REVIEWS THE CDC GUDIELINES AND CREATES A METHODOLOGY OF WHAT TYPE OF MASK TO WEAR FOR A PARTICULAR SITUATION.

WHY RISK ANALYSIS IS IMPORTANT

ONE MAY LOGICALLY ASK JUST ALWAYS WEAR THE BEST MASK EVERYWHERE AND YOUR ARE THE SAFEEST. THIS IS A BAD APPROACH FOR TWO REASONS.

1. WE WANT TO PRESERVE OUR MASKS AND FILTERS ARE EXPENSIVE OR RESOURCES ARE HARD TO FIND TO ONLY EMERGENCY SITUATIONS. IMAGINE IS ALL 350 AMERICANS GOT 1 N95 MASK THAT WOULD LEAVE HEALTH CARE WORKS WITH ZERO
2. USUALLY THE BETTER MASKS ARE HARDER TO BREATH IN HOTTER AND MORE UNCOMFORTABLE
3. PEOPLE WITH DIFFERENT RISK FACTORS WOULD WEAR DIFFERENT LEVELS OF PROTECTION IE HOSPITAL WORKS GET THE N95 MASKS THE PUBLIC DONT. IF YOU ARE OVER 65 THAT'S A HUGE RISK FACTOR THAT'S DIFFERENT THEN IF YOU 8 YEAR OLD. HOW MUCH VIRUS IN THE COMMUNITY IS DIFFERENT FORM PLACE TO PLACE. THE AIR CIRCULATION ARE OUTSIDE INSIDE IN A BASEMENT OR IN A WAREHOUSE. THIS IS WHY THIS IS SO IMPORTANT TO DO. ONCE YOU HAVE IT DONE YOU JUST LOOK IT UP AND YOUR DONE. THIS VIRUS IS RAPIDLY CHANGING AND NOW WE MUST ADJUST AND BE FLEXIBLE AND RISK ACCESS EVERYTIME WE LEAVE THE HOUSE.

THESE THREE FACTORS ARE WHY RISK ASSESSMENT IS NEEDED. THE END GOAL IS TO HAVE A LOOKUIP TABLES OR COMBINED TABLE THAT YOU JUST SCROLL THOUGH AND TAKE THE HIGHEST RISK IN THAT ROW. IT SOUNDS CONFUSING ITS REALLY NOT

SO NOW LETS TALK ABOUT HOW TO MAKE A RISK ASSESSMENT



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

STEPS TO DETERMINING RISK ANALYSIS

THE STEPS ARE AS FOLLOWED

1. DETERMINE THE CRITERIA THAT MAKES THE RISK
2. FOR EACH CRITERIA DEFINE LEVELS OF RISK FOR THAT EVENT AND PARAMETERS THAT DETERMINE THE LEVEL OF RISK (SOUNDS CONFUSING ITS NOT)
3. FOR EVERY EVENT YOU GO TO GO THROUGH EACH TO ABLE AND TAKE THE HIGHEST
4. OPTIONAL YOU COULD HAVE A LOOK UP TABLE WITH VALUES

THIS MAY SEEM LIKE MANY EVENTS ARE HIGH RISK. WELL TO BE HONEST THEY ARE. THIS VIRUS IS JUST AT CONTAGIOUS AS SMALL POX OR MEASLES BUT WORSE SINCE WITH THOSE PATIENTS KNOW QUICKLY THEY ARE SICK. SARS-CoV-2 40% OF PEOPLE ARE INFECTED AND THEY DONT KNOW IT. ITS IMPORTANT THAT WE REMEMBR THIS. WE ALL GET COMPLACENT. BUT 6 MONTHS INTO THE PANDEMIC UNLESS YOU ARE IN NYC YOU ARE MUCH WORSE OFF THEN YOU WERE WHEN WE LOCKED DOWN. THERE IS A REASON THESE RISKS ARE ACCESSED BY THE CDC THIS WAY.

VISUALIZATION OF PROCESS





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

COVID-19 RISK ACCESSMENT

TWO FACTORS HAS CHANGED THIS FROM PREVIOUS VERSION. THE METHOD OF TRANSMISSION OF THE VIRUS HAS NOW BEEN DETERMINED TO BE AEROSOL MEANING THE VIRUS STAYS IN THE AIR FOR HOURS. WITH THAT AND 40% ASYMPTOMATIC THE VALUES OF THE TABLE HAVE CHANGED GREATLY

WITH THIS BEING SAID IF YOU ARE PLANNING ON VISITING FRIENDS OR FAMILY INDOORS PLEASE DO THE ENVIRONMENTAL FACTOR TABLE FIRST. YOUR RISK IS ALREADY HIGH . SO YOU MAY SKIP ALL OTHER TABLES. IF YOU ANSWER NO TO ALL QUESTIONS THEN YOU MAY COME BACK AND DO THE DEMOGRAPHIC AND BIOMETRIC TABLE.

STEP 1: CRITERIA THAT DEFINES A RISK

THESE ARE GOING TO THE CRITERIA EVALUATED TO DETERMINE A RISK OF A EVENT BASED ON THE CDC. ITS IMPORTANT TO UNDERSTAND THEM

RISK CRITERIA AREAS TABLE

CRITERIA	RATIONAL	SIMPLE RATIONAL
DEMOGRAPHIC SPREAD ANALYSIS	WHAT LEVEL IS SPREAD OF THE VIRUS IS IN OUR COMMUNITY. YOUR LOCAL HEALTH DEPARTMENT WEBSITE CAN LET YOU KNOW HOW YOUR COUNTY IS DOING. THE AREAS CONSIST OF CLUSTER COMMUNITY SPREAD OUTBREAK AND EPICENTER THESE WILL BE DEFINED LATER	UNDERSTAND VIRUS IN YOUR COMMUNITY
BIO-METRIC ANALYSIS	THESE ARE ANY RISK FACTORS YOU MAY HAVE THAT WOULD MAKE YOU MORE LIKEY TO HAVE A SEVERE DIEASE	COULD I GET REALLY SICK IF INFECTED
ENVIRONMENT FACTOR ANALYSIS	THIS TAKES IN ACCOUNT OF WHETHER SOMETHING IS INDOOR OR TO ? OUT DOOR CIRCULATION OF AIR DENSITY OF HOW MANY PEOPLE IN STORE. AMOUNT OF TIMES WAITING IN A LINE.	HOW SAFE IS THE PLACE IM GOING
THIS TABLE SHOULD BE	THE SAME FOR EVERYONE	CDC DEFINES IT



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

STEP 2: PARAMETERIZE TABLES AND ASSIGN RISK

ALL THIS MEANS IS WE WILL GO THROUGH EACH CRITERIA AND ESTABLISH SOME PARAMETERS OR INPUT TO LOOK AT TO SEE IF A EVENT IS RISKY OR NOT

SO FROM OUR FIRST TABLE WE KNOW THAT THE THREE TABLES WE NEED ARE

1. DEMOGRAPHIC SPREAD TABLE
2. BIO-METRIC ANALYSIS TABLE
3. ENVIRONMENTAL FACTOR TABLE





COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

DEMOGRAPHICS OF SPREAD TABLE

THIS TABLE AGAIN IS DEFINED BY THE CDC. AND INDIVIDUAL WOULD JUST HAVE TO FIND THEIR LOCAL HEALTH DEPARTMENT STANCE ON WHATS HAPPENING.

THIS TABLE ASSIGNS A 1 TO 1 RATIO BETWEEN PARAMETER AND RISK. FOR EVERY ONE PARAMETER THERE WILL BE A UNIQUELY DEFINED RISK ASSESSMENT

TABLE

PARAMETER	CHARACTERISTICS	RISK ANALYSIS	RISK LEVELS
CLUSTER	PEOPLE KNOW WHERE THEY GOT THE VIRUS FROM. PEOPLE WERE AT CHURCH OR WENT TO A PARTY OR A FAMILY MEMBER GOT IT. DURING A PANDEMIC THIS IS THE LOWEST RISK DEMOGRAPHIC	LOW UNLESS YOU WERE AT THE CHURCH YOU COULD NOT GET IT. IT MEANS CONTACT TRACING IS WORKING THERE ISOLATING PEOPLE BEFORE THEY CAN INFECTION OTHER PEOPLE	LOW
COMMUNITY SPREAD	THIS HAPPENS WHEN PEOPLE IN THE COMMUNITY START GETTING THE VIRUS AND THEY HAVE NO IDEA WHERE THEY GOT THE VIRUS.	MEDIUM THIS MEANS CONTACT TRACING IS MISSING CLUSTERS AND THESE CLUSTERS ARE GOING OUT INTO THE COMMUNITY USUALLY ASYMPTOTICALLY AND SPREAD THE VIRUS	MEDIUM
OUTBREAK	THIS OCCURS WHEN LARGE SECTIONS OF POPULATION BEGIN TO FALL ILL. WE USUALLY NOTICE A SHARP INCREASE IN CASES AND BEGIN TO SEE A INCREASE IN TIME. ICU HOSPITAL BEDS.	THIS IS HIGH RISK YOU DONT WANT TO BE OUT ONLY FOR EMERGENCIES DURING THIS	HIGH
EPICENTER	HOSPITALS BED ARE FULL. ICU ARE MAXING OUT. CASES CONTINUING TO RISE.	YOU SHOULD NOT GO OUT. HAVE ENOUGH FOOD FOR ABOUT A 3 TO 4 WEEKS STAY INSIDE SHUT DOWN ORDERS SHOULD BE ACTIVATED.	CRITICAL

SCORING THE TABLE

TO SCORE THIS TABLE ITS EASY THE DETERMINATION IS THERE IN FRONT OF BASED ON WHAT THE LEVEL OF SPREAD IN YOUR COMMUNITY IS.



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

BIO-METRIC PARAMATIZED TABL

E

BIO-METRICS IS INFORMATION ABOUT A PERSON. BELOW I MADE A SAMPLE LIST OF SOME COMMON RISK FACTORS FOR COVID. WRITE DOWN ALL THE ONES THAT APPLY TO YOUR HOUSE HOLD. THE RISK LEVEL IS DEFINED BY CDC

NOTICE HERE THAT THE EACH PARAMETER DOES ASSIGN A RISK BUT YOU ADD THEM UP TO ASSIGN THE RISK.

TABLE

RISK LEVELS	PARAMETERIZED LIST	RATIONAL	ANALYSIS
GO BY THE ANALYSIS COLUMN	BLOOD TYPE	FOR UNKNOW REASONS PEOPLE WITH BLOOD TYPE A ARE MORE LIKEY TO HAVE SEVERE INFECTION	0 OR 1 IS LOW RISK
	WEIGHT	THIS HAPPENS WHEN PEOPLE IN THE COMMUNITY START GETTING THE VIRUS AND THEY HAVE NO IDEA WHERE THEY GOT THE VIRUS.	2-3 MEDIUM RISK
	HIGH SUGAR	THIS OCCURS WHEN LARGE SECTIONS OF POPULATION BEGIN TO FALL ILL. WE USUALLY NOTICE A SHARP INCREASE IN CASES AND BEGIN TO SEE A INCREASE IN ICU HOSPITAL BEDS.	3 TO 4 HIGH RISK
	WEAKENED IMMUNE SYSTEM	HOSPITALS BED ARE FULL. ICU ARE MAXING OUT. CASES CONTINUING TO RISE.	5 OR MORE CRITICAL

SCORING THE TABLE

COUNT YOUR RISK FACTOR AND LOOK IN THE DETERMINATION COLUMN TO SEE WHAT RISK LEVEL IT IS .



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

ENVIROMENTAL FACTOR ANALYSIS TABLE

THIS PART ANALYSIS THE PHYSICAL ENVIRONMENT YOU ARE GOING TO. ITS BROKEN UP WHETHER YOU ARE GOING TO A PUBLIC PLACE WHERE YOU WILL BE AROUND A LOT OF DIFFERENT PEOPLE OR THEN A PRIVATE SETTING GOING TO A FRIENDS HOUSE FOR DINNER OR GAME NIGHT. SO CHOOSE ONE THE TABLES NOT BOTH. ARE YOU GOING TO A PUBLIC OR PRIVATE PLACE.

REMEMBER ONLY DO ONE TABLE

PUBLIC INDOOR SETTING

THIS MEANS SHOPPING PLACES. IT DOES NOT MEAN VISITING FRIENDS OR FAMILY. PLEASE SEE NEXT TABLE FOR THIS.

ENVIRONMENTAL FACTOR	ANSWER	RISK LEVEL	RATIONAL
AIR CIRCULATION	BASEMENT LOW CIRCULATION	H	AIR MOVEMENT DISPERSES VIRUS
	SMALL STORE WITH CIRCULATION	M	
	LARGE STORE WITH AVERAGE CIRCULATION	L	
DENSITY		H	MORE PEOPLE IINCREASES CHANCES OF INCREASED VIRAL LOADS
	NORMAL HOUR OF A DAY	M	
	OFF TIME HOUR OF DAY	L	
DURATION	SITTING SETTING	M	MORE LIKEY TO BREATH IN SAME AIR WITH LOW AND MEDIUM DENSITY MOVING FORCES CHANGES AND CIRULATES THE AIR
	SHOPPING SETTING		
	GYM SETTING	H	
			INCREASE BREATHING MORE VIRUS BEING EXPELLED AND SPACE IS AMLL.



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE **INTO MOST EFFECTIVE CLOTH MASK**

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

HOUSEHOLD INDOOR SETTING (FAMILY / FRIENDS)

THIS TYPE OF EVENT IS AUTOMATICALLY CONSIDERED A HIGH RISK EVENT. WITH AEROSOLS AND ASYMPTOMATIC SPREAD. THIS TYPE OF EVENT IS WHAT TURNS A CLUSTER AT A SINGLE WORK PLACE INTO A CLUSTER AT 10 WORK PLACES. THIS VISITS SHOULD BE AVOIDED UNLESS THEY ARE OUTDOORS.

SETTING	RATIONAL
NO ONE IN HOUSEHOLD HAS TRAVELED IN THE PAST FOURTEEN DAYS	THIS SPREAD IS THE MOST DANGEROUS. ASSUME YOU VISIT YOUR BROTHER 3 HOURS AWAY. HIS CHILD IS INFECTED. YOU GET INFECTED AND YOU WORK AS A PCP DOCTOR. YOU WILL BE EXPOSING PATIENTS WHO WHO GO BACK TO THEIR HOMES INFECT THEIR LOVED ONES. BY STAYING IN ANOTHER HOUSE HOLD IF ANY OF THE LEFT QUESTIONER ARE TRUE. YOU SHOULD NOT GO.
IF YES TO ANY YOUR RISK LEVEL IS CRITICAL	
NO ONE IN THE HOUSEHOLD INCLUDING YOUR SELF WORK FOR A COMPANY IN WHICH YOU	
IF MULTI-GENERATIONAL HOUSEHOLD HAS ANYONE STAYED OVER ANOTHER HOUSE BESIDES THEIR OWN.	
IF STAYING OVER NIGHT DO YOU HAVE YOUR OWN BEDROOM AND BATHROOM	
WILL YOU BE ABLE TO MAINTAIN 6 FEET DISTANCE AND HAVE A MASK ON AT ALL TIMES.	



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

GETTING THE FINAL SCORE OF THE RISK ANALYSIS

FINALLY OUT OF THE THREE TABLES TAKE THE HIGHEST RISK DETERMINED THAT WAS GENERATED. SO IF YOU HAVE LOW MEDIUM HIGH IT WOULD BE HIGH. THIS IS YOUR FINAL SCORE.

FINAL SCORE TO WHAT TO WEAR

RISK DETERMINATION	MASK TO WEAR	FILTER TO WEAR	RATIONAL
LOW	ANY MASK	MECHANICAL IN MASK IS ENOUGH	OUTSIDE EVENT USUALLY WHERE NOT CROWDED YOU HAVE THE MASK INCASE YOU CANT MAINTAIN 6 FEET APART
MEDIUM	UNIVERSAL PLEATED MASK	MECHANICAL AND ELECTROSTATIC FILTER	HAVE BOTH TYPES OF FILTRATION SO SOME PROTECTION
HIGH	UNIVERSAL PLEATED MECHANICAL FILTER MASK	MECHANICAL HYBRID AND ELECTROSTATIC FILTERS	CLOSEST THING AND IF FIT WELL GIVES SOME FILTRATION OF A N95
CRITICAL	STAY HOME	STAY HOME	HIGH RISK OF DEATH IF INFECTED YOU NEED TO ISOLATE TO PROTECT



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE **INTO MOST EFFECTIVE CLOTH MASK**

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

PART 6: A LAST ATTEMPT

AT THE TIME OF UPDATING THIS DOCUMENT. I REFLECT ON THE FIRST TIME I HEARD ABOUT A CORNAVIRUS IN CHINA ON DECMEBER 26TH 2019. NINE MONTHS LATER I HAVE LOST A FEW FRIENDS TO COVID 19 AND WAS INFECTED WITH THE VIRUS MY SELF DESPITE ALWAYS WEARING A MASK. THESE MASKS WILL NOT PREVENT TRANSMISISON

I HOPE READING THIS DOCUMENT ENCOURAGES YOU TO WEAR A MASK OR DESIGN A MASK OR JUST BE EDUCATED ON THE IMPORTANCE OF WEARING A FACE MASK. I HAVE ONE MORE REASON WHY YOU SHOULD WHERE A FACE MASK AND THAT IS....

I HOPE YOU NEVER LOOSE SOMEONE TO COVID-19. FROM A PERSON EXPERIENCE ITS A TYPE OF DEATH THAT I HAVE TROUBLE RATIONALIZING AS I USUAL DO WHEN SOMEONE DIES.

WHEN SOMEONE IS OLD YOU RATIONALIZE THE DEATH AS "THEY LIVED A GOOD LIFE". IF SOMEONE GOES OUT IN MILITARY YOU RATIONALIZE "I KNEW THIS WAS A POSSIBILITY". IF SOMEONES DIES IN A FREAK ACCIDENT YOU RATIONALIZE "WELL THAT COULD NEVER HAPPEN AGAIN". IF SOMEONE DIES OF A DRUG OVERDOSE YOU RATIONALIZE "WELL HE DIED SINCE HE DID DRUGS"

LOOSING SOMEONE TO COVID YOU CAN NOT RATIONALIZE. IT WAS CAN STRIKE ANYONE ANYWHERE. SOMEONE PERFECTLY HEALTHY COULD BE FINE ONE WEEK AND DEAD THE NEXT WEEK. ANYONE CAN BE AFFECTED THE FALL THIS VIRUS WILL RAMP UP MUCH LIKE THE FLU.

NOW IS THE TIME WE PREPARE EDUCATE AND PRACTICE. PRACTICING WASHING OF HANDS, APPLYING HAND SANITIZER, FINDING A GOOD MASK GETTING USED TO THE MASK. THESE ARE HYGIENE ITEMS WE CAN ALL IMPROVE ON.

WEARING A MASK DOES PREVENT EXHALATION OF THE VIRUS TO OTHERS

WEARING A MASK CAN PREVENT INHALATION OF THE VIRUS FROM OTHERS

WITH THAT SAID ONE IS GOING TO BE ABLE TO ENFORCE MASKING. THERE WILL ALWAYS BE AROUND IT.



COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE **INTO MOST EFFECTIVE CLOTH MASK**

REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

WE CALL ON SOCIETY TO BE RESPONSIBLE.

WE HAVE A TOOL TO PREVENT TRANSMISSION.

SO WE SHOULD USE IT...

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COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

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COMBING FILTRATION BREATH ABILITY AND AIR LEAKAGE INTO MOST EFFECTIVE CLOTH MASK

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REDUCING TRANSMISSION OF SARS-CoV-2 AND PREVENTING INFECTION OF COVID-19

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